AMENDMENTS TO THE CLAIMS

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for facilitating parsing XML data, the method comprising:

~~creating~~ receiving a plurality of user-defined parsing ~~function~~ functions, the parsing ~~function~~ functions being ~~a member~~ members of a user class library, the ~~function~~ functions each containing a custom parsing code written by a user to customize the parsing of the content of XML elements,

receiving a parsing map for mapping [[an]] each of a plurality of XML ~~element~~ elements to one of the user-defined parsing ~~function~~ functions, the ~~mapping the XML element to the parsing function including creating a~~ parsing map describing [[the]] each XML element by an XML element name and identifying the class member associated with the XML element to be used as a callback method for parsing the content of the XML element;

creating a parser to pre-parse XML source data, the parser including a parsing agent, the parsing agent automatically generating a parsing state machine ~~in accordance with~~ based on the XML element names defined in the parsing map;

exposing the mapping to the parser via a communication channel;

receiving an event for the XML element from an event-based reader of XML data containing the element;

pre-parsing the content of the XML element from the XML source data using the parsing state machine, the pre-parsing comprising identifying the user-defined parsing function to which the XML element is mapped by the parsing map; and

sending the pre-parsed content of the XML element via the communication channel to the user-defined parsing function.

2. (Canceled)

3. (Previously presented) The method of Claim 1, wherein sending the pre-parsed content of the mapped XML element via the communication channel to the parsing function includes looking up the class member identified as being associated with the XML element, and sending the pre-parsed content of the XML element to the associated class member.

4. (Previously presented) The method of Claim 1, wherein the parsing function is a reusable object to which the XML element has been previously mapped, and mapping the XML element to the parsing function includes:

creating the parsing map describing the XML element and identifying the reusable object associated with the XML element; and

joining the reusable object to the other parsing functions described in the parsing map.

5. (Original) The method of Claim 1, wherein the agent is an implementation class member and the communication channel is an interface to the implementation class member that enables the snapping to be exposed to the agent automatically.

6. (Original) The method of Claim 1, wherein the event-based reader of XML data is a SAX reader, and receiving the event for the mapped XML element includes selecting from a plurality of events that have been pushed by the SAX reader only those events that are associated with the mapped XML element.

7. (Original) The method of Claim 1, wherein pre-parsing the content of the XML element includes at least one of verifying a structure of the XML element relative to other XML elements occurring in the XML data, verifying a consistency of the XML element, extracting an attribute of the XML element, and collecting a content of the XML element.

8. (Original) The method of Claim 1, further comprising:

mapping an XML element that was previously mapped to an existing parsing function;

joining the existing parsing function to the created parsing function;

sending the pre-parsed content of the mapped XML element via the communication channel to the joined parsing functions.

9. (Currently amended) A computer system for parsing XML data, the computer system comprising a processor and a memory having computer-executable instructions that, when executed by the processor, generate:

a library of custom user-defined parsing functions to parse content of XML elements, the custom user-defined parsing functions being members of a user class library and each having a respective class member name;

a parser having a ~~map that associates~~ plurality of parsing maps, each mapping XML elements to ones of the custom user-defined parsing functions, ~~with~~ each XML ~~elements~~ element being mapped to a custom user-defined parsing function to be used as a callback method for said XML element, each mapping identified in the parsing map by associating a class member name [[to]] of said custom user-defined parsing function with an XML element name of said XML element; and

a parsing agent, the parsing agent automatically generating a parsing state machine ~~in accordance with the XML element names defined in~~ based on the plurality of parsing [[map]] maps, the parsing agent operating in conjunction with a communication channel to receive the parsing maps, the parsing agent obtaining the content of an XML element on behalf of the parser in accordance with the [[map]] parsing maps by ~~pre-parsing the~~ pre-parsing the content of the XML element from the XML source data using the parsing state machine, the pre-parsing further comprising identifying the user-defined parsing function to which the XML element is mapped by the parsing maps, wherein ~~the map is accessed via the communication channel, and further where~~ the parsing agent passes the content of the XML element to the ~~associated~~ identified custom user-defined parsing function via the communication channel.

10. (Previously presented) The computer system of Claim 9, wherein the library of custom parsing functions is a class library of members that receive content from the parsing agent via the

communication channel.

11. (Canceled)

12. (Previously presented) The computer system of Claim 9, wherein at least one of the 'parsing functions is a reusable object to which an XML element has been previously associated, and the parser joins the reusable object to the other parsing functions in the map.

13. (Previously presented) The computer system of Claim 9, wherein the parsing agent is an implementation class member and the communication channel is an interface to the implementation class member that enables the agent to access the map automatically.

14. (Previously presented) The computer system of Claim 9, further comprising an event-based reader, wherein the parsing agent obtains the content of the XML element on behalf of the parser, including handling events generated for the XML element by the event-based reader.

15. (Previously presented) The computer system of Claim 14, wherein the event-based reader of XML data is a SAX reader, and handling events generated for the XML element includes at least one of verifying a structure of the XML element relative to other XML elements occurring in the XML data, verifying a consistency of the XML element, extracting an attribute of the XML element, and collecting the content of the XML element.

16-30. (Canceled)

31. (New) A computer-readable storage medium comprising computer-executable instructions that, when executed by a computer, perform a method of parsing XML data, the method comprising:

receiving a plurality of user-defined parsing functions, each user-defined parsing

function containing custom parsing code written by a user to custom parse a content of an XML element;

receiving a parsing map, the parsing map mapping each of a plurality of XML elements to a user-defined parsing function among the plurality of user-defined parsing functions, the parsing map identifying for each XML element the user-defined parsing function to be used as a callback method for said XML element;

creating a parser to pre-parse XML source data, the parser including a parsing agent;

exposing the parsing map to the parser via a communication channel;

automatically generating, with the parsing agent, a parsing state machine based on the parsing map exposed to the parser;

receiving an event for a first XML element from an event-based reader of XML data containing the element, the first XML element being an XML element among the plurality of XML elements;

pre-parsing the content of the first XML element from the XML source data using the parsing state machine, the pre-parsing comprising identifying a user-defined parsing function to which the first XML element is mapped by the parsing map;

sending the pre-parsed content of the first XML element via the communication channel to the identified user-defined parsing function; and

using the identified user-defined parsing function as a callback method for parsing the content of the first XML element.